

## C L A I M S

1. A nursery irrigating system comprising:

(a) a remotely placed water storage tank connected to at least one plant tray with an overhead pipe system;

(b) the overhead pipe system having a delivery pipe to deliver and remove water from the plant tray;

(c) the nursery irrigating system being easily disassembled and reconfigured; and

(d) a controller allowing for unattended system operation.

2. The nursery irrigation system of Claim 1 further comprising a storage tank with a outflow line connected to a centrifugal pump.

3. The nursery irrigation system of Claim 2 further comprising the use of the centrifugal pump to provide force to move the water into the main delivery assembly.

4. The nursery irrigation system of Claim 3 further comprising a venturi vacuum pump to remove the water.

5. The nursery irrigation system of Claim 4 further comprising a check valve on the main delivery ascending pipe to prevent water from backflowing from the delivery pipes into the storage tank.

6. The nursery irrigation system of Claim 5 further comprising tee lines in the main delivery pipe that feed water to the tray delivery assembly for delivery to each plant tray.

7. The nursery irrigation system of Claim 6 further comprising a solenoid valve in the tray delivery assembly which can be remotely controlled to initiate and terminate the supply of water to the plant tray.

8. The nursery irrigation system of Claim 7 further comprising a solenoid valve in the tray delivery assembly attached to a timer to allow for timed operation of the initiation and termination of the supply of water to the plant tray.

9. The nursery irrigation system of Claim 8 further comprising the use of a Venturi Vacuum to remove water from the plant tray through the tray drain assembly and the main drain assembly and into the storage tank.

10. The nursery irrigation system of Claim 9 further comprising a vacuum shut off valve acting under pressure from the centrifugal pump to allow water to flow on to the plant tray and acting under vacuum from the venturi vacuum pump allows flow from the plant tray.

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11. The nursery irrigation system of Claim 10 further comprising a check valve on the tray drain pipe preventing backflow of water from the main drain pipe into the tray drain assembly.

12. The nursery irrigation system of Claim 11 further comprising an input line from the main drain line into the water storage tank.

13. The nursery irrigation system of Claim 12 further comprising the controller having at least one timer hooked to the solenoid valve to have timed control of the flow and removal of water to the plant table.

14. The nursery irrigation system of Claim 13 further comprising the controller having up to 60 timers hooked to solenoid valves to have timed control of the flow and removal of water from the plant table.

15. The nursery irrigation system of Claim 14 further comprising a tray drain assembly that can be easily disconnected from the main drain assembly and readily disassembled and reassembled.

16. The nursery irrigation system of Claim 15 further comprising a tray delivery assembly that can be easily disconnected from the main delivery assembly and easily disassembled and reassembled.

17. The nursery irrigation system of Claim 16 further comprising a main delivery assembly that can be easily disassembled and reassembled.

18. The nursery irrigation system of Claim 17 further comprising a main delivery assembly feeding at least one plant containing plants from below the tray.

19. A nursery irrigating system comprising:

- (a) a remotely placed water storage tank connected to at least one plant tray with a piping system;
- (b) the piping system having a delivery pipe to deliver and remove water from the plant tray;
- (c) the storage tank having an outflow line connected to a centrifugal pump;
- (d) centrifugal pump being adapted to move the water into the main delivery assembly;
- (e) an interconnection between the main delivery assembly and the main drain assembly, allowing water to flow from the main delivery assembly into the venturi vacuum;
- (f) a check valve on the main delivery ascending pipe to prevent water from backflowing from the delivery pipes into the storage tank;
- (g) at least one tee line in the main delivery assembly that feed water to the tray delivery assembly for delivery to each plant tray;
- (h) a solenoid valve in the tray delivery assembly which can be remotely controlled to initiate and terminate the supply of water to the plant tray;
- (i) the solenoid valve in the tray delivery assembly being connected to a timer to allow for timed operation of the initiation and termination of the supply of water to the plant tray;

- (j) the use of a Venturi Vacuum to remove water from the plant tray through the tray drain assembly and the main drain assembly and into the storage tank;
- (k) a vacuum shutoff valve acting under positive pressure from the centrifugal pump to allow water to flow on to the plant tray and acting under vacuum from the venturi vacuum to remove water from the plant tray;
- (l) a check valve on the tray drain pipe preventing backflow of water from the main drain pipe into the tray drain assembly;
- (o) an input line from the main drain line into the water storage tank;
- (p) a timed control of the flow and removal of water from the plant table utilizing the timers hooked to the solenoid valves;
- (q) a tray drain assembly that can be easily disconnected from the main drain assembly and readily disassembled and reassembled;
- (s) a tray delivery assembly that can be easily disconnected from the main delivery assembly and easily disassembled and reassembled; and
- (t) a main delivery assembly that can be easily disassembled and reassembled.

20. A method for providing irrigation to at least one nursery of nursery plants comprising:

- (a) providing a remotely placed water storage tank connected to at least one plant tray with a piping system;
- 5 (b) passing water through a delivery pipe in the piping system to deliver or remove water from the plant tray;
- (c) providing an outflow line for the storage tank, the outflow line being connected to a centrifugal pump;
- (d) moving the water with the centrifugal pump into the main  
10 delivery assembly;
- (e) connecting the main delivery assembly and the main drain assembly in order to allow a water flow from the drain pipe into the delivery pipe;
- (f) preventing backflow from the delivery pipes into the  
15 storage tank as desired;
- (g) providing a tee line to the tray delivery assembly for delivery of water to each plant tray from below the plant tray;
- (h) remotely controlling the tray delivery assembly with a  
20 solenoid valve to initiate or to terminate the supply of water to the plant tray;
- (i) timing the solenoid valve in the tray delivery assembly allow for timed operation of the initiation and termination of the supply of water to the plant tray;
- (j) removing water from the plant tray through the tray drain

assembly and the main drain assembly and into the storage tank with venturi vacuum;

(k) applying a vacuum shutoff valve acting under positive pressure from the centrifugal pump to allow water to flow on to the plant tray and acting under vacuum from the venturi vacuum to remove water from the plant tray;

(l) providing a check valve on the tray drain pipe to prevent backflow of water from the main drain pipe into the tray drain assembly;

(o) providing an input line from the main drain line into the water storage tank;

(p) timing the solenoid valves to control the flow and removal of water from the plant table;

(q) providing a simplified connecting device for the tray drain assembly that can be easily disconnected from the main drain assembly and readily disassembled and reassembled;

(s) providing the a tray delivery assembly that can be easily disconnected from the main delivery assembly and easily disassembled and reassembled; and

(t) providing a main delivery assembly that can be easily disassembled and reassembled.